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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,540	03/10/2004	Sergey Savastiouk	M-15302-1P US	6386

32605 7590 04/26/2006

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EXAMINER

LEE, KYOUNG

ART UNIT	PAPER NUMBER
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2812

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/798,540	Applicant(s) SAVASTIOUK ET AL.	
	Examiner Kyoung Lee	Art Unit 2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) 1-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 46-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03/10/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/29/04, 5/11/05, 7/11/05, 8/10/05</u>
<u>10/17/05, 11/7/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Argument

Claims 46-53 were rejected under 35 U.S.C. 102(b) over U.S. patent no. 6,190,940 to DeFelice et al. This rejection was discussed at the telephone interview with Michael Shenker on January 30, 2006. An agreement was reached that DeFelice did not show "one or more openings which overlie the contact pads and also overlie one or more regions adjacent to the contact pads" as recited in Claim 46. The examiner withdrawn the first office action mailed on 11/03/2005. Argument is moot.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 46, and 48-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Chung et al. (U.S. Patent No. 6,399,178).

In claim 46, Chung discloses a method comprising forming one or more conductive contact pads (32) in a first substrate (30), and forming dielectric over the one or more contact pads (12), with the dielectric having one or more openings (14) which overlie the contact pads and also overlie one or more regions adjacent to the contact

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pads (see figures 4-7 and column 10 line 54 through column 12 line 4 and column 7, lines 23-38).

In claim 47, Chung discloses the method wherein the regions adjacent to the contact pads are less solder wettable than the contact pads (see figure 7 and column 13, lines 28-38). Chung teaches the adhesive layer 12 is insulating layer. An insulating adhesive layer is considered to be less solder wettable than the contact pad.

In claim 48, Chung discloses the method wherein the regions adjacent to the contact pads are dielectric regions (see column 11, lines 4-29).

In claim 49, Chung discloses the method placing solder paste (34) into the one or more openings (14) and heating the solder paste to melt the solder (see figures 4-7, and column 10 line 54 through column 11 line 18).

In claim 50, Chung discloses the method comprising soldering one or more contact pads (62) of a second substrate (60) to the one or more contact pads (32) of the first substrate (30) with solder obtained from the solder paste (34) (see figure 6, and column 11 line 55 through column 12 line 3).

In claim 51, Chung discloses the method wherein the second substrate is a semiconductor integrated circuit (see column 11, lines 58-59).

In claim 52, Chung discloses the method wherein the first substrate is a semiconductor integrated circuit (see column 10, lines 54-60).

In claim 53, Chung discloses the method wherein the first substrate is an integrated circuit packaging substrate, which does not include a semiconductor substrate (see column 10, lines 54-60).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyoung Lee whose telephone number is (571) 272-1982. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael S. Lebentritt can be reached on (571) 272-1873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KL 4/18/06


HA NGUYEN
PRIMARY EXAMINER